

The EU Emissions Trading System: Method and Effects of Free Allowance Allocation

Abstract

This in-depth analysis for the Committee on Budgetary Control concerns the system used for the free allocation of emission allowances within the EU ETS. It reviews recent press criticisms of the free allocation system, reviews the transparency of the system and assesses the risk it creates unintended distortions. It estimates the cost of free allocation to the EU budget and how these proceeds might be spent. It concludes with three policy recommendations.

Background

The EU Emissions Trading Scheme (EU ETS) is a key tool of the European Union's policy to combat climate change through reducing greenhouse gas emissions, whereby participating companies must surrender allowances for the carbon they emit. Auctioning is the default method for allocating emission allowances, but a sizeable proportion are also allocated for free to sectors at risk of carbon leakage. The free allocation of allowances is being phased out for a range of sectors.

This analysis for the Committee on Budgetary Control considers the system used for the free allocation of emission allowances and addresses questions on the transparency of the system, the impact on EU finances, any distortions it creates, and its effectiveness in achieving the EU's environmental goals.

Benchmarking and the allocation of allowances

The allocation of free allowances to industrial emitters is based on a benchmarking system. Product benchmarks are expressed in terms of greenhouse gas (GHG) emission intensity (tonnes of GHG emitted per tonne of product produced) and represent the performance of the 10 per cent most efficient installations covered by the EU ETS producing the product. There is reasonable transparency in this process – the methodology by which benchmarks are determined is clear and explicit and the benchmarks themselves are explicit and accessible, as is the allocation of free allowances across installations.

The impact on EU Revenues

Revenues from the auctioning of allowances accrue to Member States and to the EU through two key funds – the Innovation Fund and the Modernisation Fund. In addition, in the near future revenues from auctions and the forthcoming carbon border adjustment mechanism (CBAM) will also contribute to EU Own Resources. To the extent that the free allocation system reduces the revenues available from the auctioning of allowances, it reduces EU revenues.

Using data and assumptions on the number of freely allocated allowances, the carbon price and the phasing out of free allocation, we estimate the value of free allocation from the commencement of auctioning in 2012 until 2022 at €127bn. The total forthcoming value over the remaining lifetime of the free allocation system (from 2023 to 2033) is estimated at €331bn. The estimated impact on Own Resources is a forgone €99bn from 2023 to 2033 from auctioning, and a further foregone €0.4bn per year in relation to the CBAM.

The effectiveness of the system of free allocation and potential distortions

The purchase of emission allowances to fulfil obligations under the EU ETS increases costs to firms and incentivises them to reduce emissions. However, carbon-intensive industries that would struggle to pass on the costs of a carbon price require some form of protection to avoid unsustainable sector contraction or a level of carbon leakage (relocation of production to areas with a lower or no carbon price) that would significantly undermine the reduction in emissions.

Although the system of free allocation is frequently criticised as providing limited if any incentives for firms to reduce their emissions, firms do still have an incentive to reduce emissions as they can sell excess freely-allocated allowances. The use of emission-intensity benchmarks to allocate free allowances also means that firms have an incentive to improve their efficiency such that a greater proportion of their emissions are covered by free allowances. Free allocation is also being phased out for aviation and certain sectors at high risk of carbon leakage – the latter through the carbon border adjustment mechanism.

That said, there are some remaining risks which could distort competitiveness, undermine emission reduction and reduce EU revenue. The definition of firms at high risk of carbon leakage is binary and could overlook sectors where some cost pass through is in fact possible. Product benchmarks, whilst effective in incentivising carbon efficiency in existing processes, are less suited to incentivising step-changes to new low-emitting technologies. Insofar as benchmarks are based on production processes or intermediate inputs rather than end products, free allocation will provide a subsidy to processes that involve higher emissions relative to lower-emitting technologies that produce the same end product but are excluded from the specific benchmark.

A final risk is that the CBAM – the key instrument for reducing free allocation – may lack political support if there is insufficient international cooperation over climate change policy, i.e. some form of carbon pricing in markets that import into the EU. This would undermine the phasing out of free allocation and the anticipated increased in EU revenue from auctioning.

Policy recommendations

Our policy recommendations for the system of free allocation are:

- Material increases in the transparency of the technical benchmarking process are unnecessary and could have negative consequences on industry competitiveness, but increased scrutiny of related political decisions could be warranted.
- There would be value in an expedited system to review and revise the product boundaries for benchmarks where there are clear competing low-emission technologies producing the same or alternative products, such that free allocation can be stopped and the distorting subsidies removed.
- The Committee on Budgetary Control should be aware of and should keep under evaluation the risk that political support for the carbon border adjustment mechanism comes into question, such that the phasing out of free allocation and increase in EU revenues is undermined.

Disclaimer and copyright. The opinions expressed in this document are the sole responsibility of the authors and do not necessarily represent the official position of the European Parliament. Reproduction and translation for non-commercial purposes are authorised, provided the source is acknowledged and the European Parliament is given prior notice and sent a copy. © European Union, 2023.

Administrator responsible: Michaela FRANKE and Stefan SCHULZ
Contact: Poldep-Budg@ep.europa.eu

Editorial assistant: Adrienn BORKA

This document is available on the internet at: www.europarl.europa.eu/supporting-analyses